## **ABSTRACT**

A system for exposing a fluid to UV energy for treatment of the fluid is provided. The system includes a fluid passageway at least partially defined by a UV energy transmissive barrier. The system also includes at least one UV energy source positioned to transmit UV energy through the UV energy transmissive barrier and into the fluid passageway. Additionally, at least one UV energy sensor is positioned to sense UV energy transmitted through the UV energy transmisive barrier. The at least one sensor is configured to detect a reduced amount of UV energy transmitted through the UV energy transmissive barrier.